Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application:

Listing of Claims:

1. (original) A method of identifying the fossa ovalis in a patient, comprising the steps of:

(a) positioning one or more electrodes against the tissue of the interatrial septum of the patient;

(b) acquiring unipolar and/or bipolar electrograms of the tissue of the interatrial septum, while moving said electrodes to a plurality of positions against said tissue of the interatrial septum; and

(c) identifying the fossa ovalis on the basis of at least one of the following parameters:

-unipolar voltage reduction
-signal fractionation
-broadened signal
-reduced signal slew rate
-reduced local myocardial impedance
-increased phase angle and
-increased pacing threshold.

2. (original) The method of claim 1, wherein the fossa ovalis is also identified on the basis of bipolar voltage reduction.

3. (original) The method of claim 1, wherein the fossa ovalis is identified on the basis at least two of the following parameters:

-unipolar voltage reduction
-signal fractionation
-broadened signal
--reduced signal slew rate
-reduced local myocardial impedance

-increased phase angle and

-increased pacing threshold.

4. (original) A method of performing a transseptal puncture on a patient, comprising the steps of:

(a) positioning one or more electrodes against the tissue of the interatrial septum of the patient;

(b) acquiring unipolar and/or bipolar electrograms of the tissue of the interatrial septum, while moving said electrodes to a plurality of positions against said tissue of the interatrial septum;

(c) identifying the fossa ovalis on the basis of at least one of the following parameters:

-unipolar voltage reduction

-signal fractionation

-broadened signal

-reduced signal slew rate

-reduced local myocardial impedance

-increased phase angle and

-increased pacing threshold

and

(d) penetrating the interatrial septum through the fossa ovalis in order to access the left atrium.

5. (original) The method of claim 4, wherein said one or more electrodes are provided on the distal end of a catheter and said positioning step comprises positioning the distal end of said catheter against the tissue of the interatrial septum of the patient.

6. (original) The method of claim 5, wherein said penetrating step comprises urging a needle through the interior of said catheter and through the fossa ovalis into the left atrium.

7. (original) The method of claim 5, wherein two electrodes are provided on said catheter, one of said electrodes at the distal end of the catheter and the other of said electrodes is located on said catheter proximal to the other electrode.

8. (currently amended) The method of claim 5, wherein a bipolar and unipolar [electrogram] electrograms [is] are acquired and further comprising the step of observing ST segment elevation in the unipolar electrogram in order to ensure that the distal end of said catheter is in contact with the tissue of the interatrial septum.

9. (original) The method of claim 4, wherein the fossa ovalis is also identified on the basis of bipolar voltage reduction.

10. (original) The method of claim 4, wherein the fossa ovalis is identified on the basis at least two of the following parameters:

-unipolar voltage reduction
-signal fractionation
-broadened signal
-reduced signal slew rate
-reduced local myocardial impedance
-increased phase angle and
-increased pacing threshold

11. (currently amended) A catheter for use in transseptal punctures, comprising:

(a) a hollow lumen [having a distal end];

(b) a first electrode positioned at [said] the distal end of the catheter; and

(c) a second electrode positioned on said catheter and spaced proximally from said first electrode

wherein said catheter is configured such that the catheter may be inserted into a sheath for a transseptal puncture and a transseptal needle may be urged through said lumen until the tip of the needle protrudes beyond the distal end of said catheter, and

further wherein said catheter is configured such that the distal end of the catheter can be used both as an electrophysiology mapping catheter for locating the fossa ovalis as well as

a dilator suitable for penetrating the fossa ovalis during a transseptal puncture procedure by urging said catheter over a transseptal needle positioned within the lumen of the catheter.

12. (new) The method of claim 1, wherein the fossa ovalis is identified on the basis of unipolar voltage reduction.

13. (new) The method of claim 4, wherein the fossa ovalis is identified on the basis of unipolar voltage reduction.

14. (new) The method of claim 4, further comprising the step of positioning an indifferent electrode within or against the patient such that said indifferent electrode may be used in conjunction with one of said electrodes positioned against the interatrial septum in order to acquire unipolar electrograms.

15. (new) The method of claim 14, wherein said at least one indifferent electrode is chosen from the group consisting of: a skin patch, a Wilson's central terminal, and an electrode positioned in a vein of the patent.

16. (new) The method of claim 6, further comprising the steps of:

-inserting a guidewire through a femoral vein of the patient and advancing the guidewire to the superior vena cava,

-inserting said catheter into a sheath;

-advancing said sheath and catheter over said guidewire into the superior vena cava in order to position the distal end of said catheter against the interatrial septum;

-after said penetrating step, urging said catheter and said sheath through the fossa ovalis into the left atrium; and

-after said sheath has been urged through the fossa ovalis, removing said catheter and said needle from the sheath.

17. (new) The catheter of claim 11, wherein said distal end of the catheter is tapered, and said second electrode is spaced from said first electrode by a distance of between about 2 and about 4 mm.

18. (new) The catheter of claim 17, further comprising first and second electrical leads in electrical communication with said first and second electrodes, and first and second cables at the proximate end of said catheter, wherein said first and second cables are in electrical communication with said first and second electrical leads and are configured to be attached to a device for recording electrograms.

19. (new) A transseptal apparatus for locating the fossa ovalis in a patient and performing a transseptal puncture of the fossa ovalis, comprising:

(a) a hollow sheath having a distal end;

(b) an internal catheter configured to be inserted into said sheath, said catheter having a lumen, a first electrode positioned at the distal end of said catheter, and a second electrode positioned on said catheter and spaced proximally from said first electrode, wherein said catheter is longer than said sheath such that said catheter may be inserted into said sheath with the distal end of said catheter protruding beyond the distal end of said sheath;

(c) a recording device for recording electrograms, said recording device in electrical communication with said electrodes;

wherein said catheter is configured such that a transseptal needle may be urged through said lumen until the tip of the needle protrudes beyond the distal end of said catheter; and

further wherein said transseptal apparatus is configured such that a user may identify the fossa ovalis of patient on the basis of at least one of the following parameters:

-unipolar voltage reduction

-signal fractionation

-broadened signal

-reduced signal slew rate

-reduced local myocardial impedance

-increased phase angle, and

-increased pacing threshold.

20. (new) The transseptal apparatus of claim 19, wherein the distal end of said catheter is tapered, and said second electrode is spaced from said first electrode by a distance of between about 2 and about 4 mm.